Date: Sat, 30 Apr 94 04:30:20 PDT
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V94 #114
To: Ham-Homebrew

Ham-Homebrew Digest  Sat, 30 Apr 94  Volume 94 : Issue 114

Today's Topics:



Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".



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Date: Fri, 29 Apr 1994 14:57:56 GMT
From: ihnp4.ucsd.edu!swrinde!elroy.jpl.nasa.gov!netline-fddi.jpl.nasa.gov!nntp-server.caltech.edu!news.claremont.edu!paris.ics.uci.edu!csulb.edu!csus.edu!netcom.com!dgf@network.ucsd.edu
Subject: Adjusting vertical polarization of yagi
To: ham-homebrew@ucsd.edu

In article <phb.767566512@melpar> you write:
>     In a recent on-the-air discussion, I pointed out the error
>of mounting a two-meter yagi in the vertically-polarized
>
>3) Has anyone out there ever purposely installed a yagi array
>vertically using a metal mast and tried to measure the effects
>(VSWR, azimuthal pattern accuracy, etc.)?  I have a A148-10S
>which is currently mounted horizontally, and have been toying
>with rotating it into the vertical plane and trying to measure
>the effects, but maybe someone else has tried it out of
>scientific curiosity.....
>

>

I'm posting this because e-mail to you bounced.

When I mounted my Cushcraft 15 element 2M yagi on the center of my mast
in vertical polarization, I arranged it so the person at the top of the tower
could adjust the axial rotation (of the boom) while I monitored SWR at the
bottom of the tower (thru about 60' of RG213). The bottom line is the SWR
went way up (over 2:1) within 10 degrees of true vertical, and we settled
on about 20 degrees off vertical (favoring the orientation that improved
drainage away from the balun box) which minimized SWR (not the absolute
minimum, but I accepted a 1.3:1 as OK).

In this situation, I get about 10 dB gain *over* a diamond 10 foot gain vertical
which is mounted about 10 feet higher on the tower (at the very top of the
mast). Everything is operating about as expected (the diamond has about 6-7
dB of gain on it's own, and the beam appears to have about 10 dB more gain in
it's favored direction).

I did not measure "directivity" or any other factor in the straight-vertical
orientation, because the higher SWR was disabling my brick at the bottom of
the tower.

I hope this helps.

73 Dave WB0GAZ dgf@netcom.com

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Date: Thu, 28 Apr 1994 12:58:52 GMT
From: ihnp4.ucsd.edu!swrinde!sgiblab!wetware!spunky.RedBrick.COM!psinntp!psinntp!
arrl.org!zlau@network.ucsd.edu
Subject: digital RF Broadcasts
To: ham-homebrew@ucsd.edu

yctcsl@cerfnet.com wrote:

: Need info on sending digital message over RF broadcast of 3 mi radius or less.
: Like to keep FCC restrictions to a minimum if possible. Message size 8bytes or
: less. Terrain varies in area of use. need freq that handles obtstruction well.

I'm certainly not a regulatory expert, but my experience is that
very low frequencies tend to handle obstructions the best.  The
Navy uses them to communicate with submarines.  I've actually
heard VLF signals through our solid metal screen room walls.
(it isn't designed to stop such low frequencies).  But, generating
strong signals generally requires large antennas and high data
rates are usually considered impossible.  Noise at VLF can also

be a big problem.  But, if you want signals to go through water,
concrete, and steel, consider frequencies below 30 kHz.

--
Zack Lau  KH6CP/1           2 way QRP WAS
                           8 States on 10 GHz
Internet: zlau@arrl.org   10 grids on 2304 MHz

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Date: Fri, 29 Apr 94 07:04:20 MST
From: ihnp4.ucsd.edu!swrinde!gatech!udel!pacs.sunbelt.net!lynx.unm.edu!
dns1.NMSU.Edu!dns1.NMSU.Edu!usenet@network.ucsd.edu
Subject: TEK RADIO.....where?
To: ham-homebrew@ucsd.edu

On Wed, 27 Apr 1994 14:10:15 GMT,
Richard Kowalsky  <cmdorat@tc.fluke.COM> wrote:

>Hi,  I have heard about a small dedicated data radio called the
>"TEK" radio.  It supposidly supports 9600 baud packet.  I would
>like to get my mits on one unfortunately, every one I ask just says
>that "they are advertized in QST, look in there."

Richard they are TEKK Inc. radios and we are using one for the university
packet node to get from mountain top to the Internet Gateway on campus. It
works ok, but it was a mess to get the deviation setup (you will neeed some
good test eq.- we used HP specctrum and a telemetery receiver). Their
address is 226 NM Parkway, Kansas City, MO. 64150 phone 1-800-521-tekk and
fax 816-746-1093.  Hope that helps. 73 Bill

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Date: Fri, 29 Apr 1994 12:46:32 GMT
From: newsgate.melpar.esys.com!melpar!phb@uunet.uu.net
Subject: Vertical yagi mounting
To: ham-homebrew@ucsd.edu

     A couple of followup comment from the original poster:

>     One of the on-the-air participants, admittedly a new ham,
>became very defensive and said that he used a Cushcraft
>A147-11 vertically polarized on a metal mast, and his antenna
>"had directivity."

     NOTE:  My on-the-air comments did not suggest the antenna
had "no directivity", only a screwed-up pattern, but the

"defensive" ham took it that way.....

>pattern off by creating either more than one lobe or skewing
>the main lobe above or below the plane of the array by some

     Poor choice of words; "above or below the plane of the array"
implies the antenna is horizontal when it isn't; what I mean
here is that the major lobe no longer points in the same direction
the antenna is pointed because of the deleterious effect of the
metal mast, which is now parallel to the parasitic directors and
has a detuning effect.

(|_|)  * Paul H. Bock, Jr. K4MSG  * Internet: pbock@melpar.esys.com
 | |)  * Senior Systems Engineer  * Telephone: (703) 560-5000 x2062

   "You can have my bug when you can pry my cold, dead fingers from
    around it....." - anonymous radiotelegraph operator

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End of Ham-Homebrew Digest V94 #114
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